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IN ESTONIA

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1 Introduction and background

Against the background of the more enterprise-driven approach adopted by the new CAP, the importance of rural development instruments is growing. Rural life plays an important role in the restructuring of the sector of agriculture and in the promotion of innovation, in the improvement of human environment and in the diversification of enterprise. Through axes 1 and 3, RDS 8 (Estonian Rural Development Strategy) contributes to the attainment of the Lisbon objectives concerning competitiveness, economic growth and the creation of new jobs, and through axis 2 to the attainment of the objective of environment-friendlier human environment.

Under axis 1, competitiveness is particularly increased by giving attention to higher value added, innovation, training and advice, bio energy and co-operation with research institutions. The environmental axis plays an important role in landscape shaping, which in its turn is related to tourism, an important income and employment opportunity in rural areas. Under axis 3, new jobs will be created beyond agriculture, providing alternative income opportunities for rural areas. Providing local level with the power of decision, the LEADER-approach contributes to the improvement of co-operation between all the sectors and to the consideration of local conditions in the attainment of objectives.

1.1. Introduction to rural technology transfer

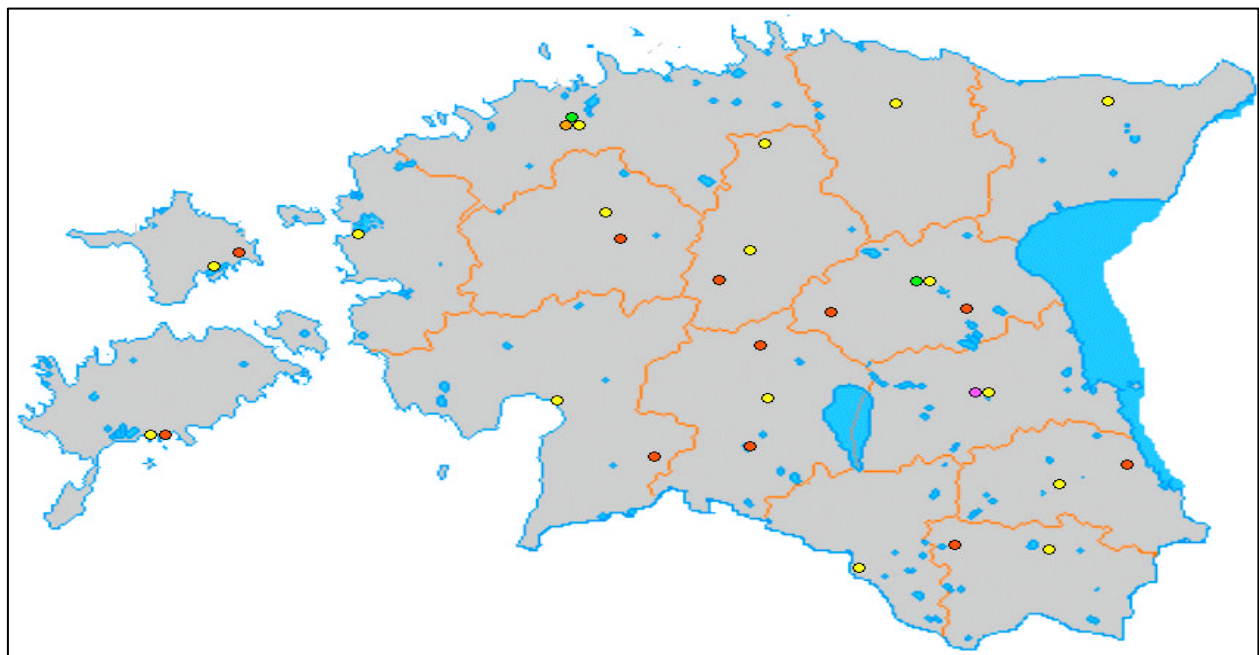
Agricultural research and food-science are some of the instruments to realise national agricultural policy and to ensure the long-time competitiveness of the sector of agriculture and its ability to adapt itself to changes.

The research institutions in the area of government of the Ministry of Agriculture are engaged in the following: the Jõgeva Plant Breeding Institute – variety breeding of agricultural crops and the collection and preservation of plant genetic resources; the Estonian Research Institute of Agriculture – studies of the economic efficiency of crop growing, processing, preservation and production and of the suitability of agricultural machinery. Estonian University of Life Sciences – agriculture and forest management, stock farming, veterinary medicine, rural life and rural economic activity, food-science, biological diversity, environmental protection, renewable natural resources and clean technologies (Map 1.1).

Low volume of research and development in the sector of enterprise is considered to be the main reason for low intensity of research and development in most new EU Member States, including Estonia. The survey “Innovation in Estonian enterprises 1998–2000” indicated the relative indifference of Estonian enterprises towards the use of universities and non-profit research and development structures. Thus, the number of innovators and their intensity in the Estonian economy has to be increased by better co-operation between the mentioned institutions.

The results of agricultural and food research are used in active agriculture through the medium of agricultural education and advisory system. As a result of this, the competitiveness of Estonian agricultural and food products increases both in internal and foreign markets.

Map 1.1 Research and development institutions, advisory centres and educational institutions



●	Research institution		
●	Vocational school		
●	Advisory centre		
●	Estonian University of Life Sciences		
●	Agricultural Research Centre		

Source: Estonian Rural Development Plan 2007-2013

1.1.1. Agricultural and rural training

Higher education in agriculture

382 students graduated from the full-time study programme and 87 students from the distance learning programme of the Estonian Agricultural University in 2004. A total of 47 master's theses and 8 doctor's theses were defended. Students were admitted to 26 specialities in 2004 total of 3,405 applications were submitted for 418 state-commissioned student places, thus, the competition ratio was 8.15 applicants per available student position. The most popular specialities remained real estate planning (competition: 23.20), natural resources consumption and protection (competition: 20.81) and landscape architecture (competition: 18.44). As of November 2004, the number of EAU students amounted to 4,708, with 1,884 students obtaining the state commissioned education and 962 studying beyond state-commissioned education in the base study programme, and with 1,167 students in the distance learning programme, 13 in the teacher training programme, 469 in the master's programme and 158 in the doctoral programme. The total number of foreign students amounted to 55. In 2004, the state commissioned EAU to provide training for 263 prospective graduates in the base study programme in the following disciplines:

- ? agriculture, forestry and fishery – 80
- ? environmental protection – 34
- ? technical specialities – 51
- ? production and processing - 15

- ? Architecture and construction - 53
- ? Veterinary medicine - 25
- ? Biosciences - 5

The state ordered 10 teacher training positions, 61 master's programme positions (4+2 system) and 18 doctoral programme positions. The preparation of the curriculum for a new doctoral study programme with a greater emphasis on joint studies was launched in 2004. The plans of EAU include the establishment and participation in the work of graduate schools, as well as devising and development of master's and doctoral study programmes in co-operation with the universities of the Baltic States and Nordic countries.

Vocational education in agriculture

According to the Ministry of Education and Research, the total number of students in agricultural specialities amounted to 1,839 in 2004. 234 students acquired secondary vocational education in basic schools and secondary schools. In addition, 82 vocational school students acquired vocational education in the specialities related to horticulture, landscape formation, agriculture and fishery. As regards the number of vocational education graduates, the specialities of horticulture ranked first with 64 graduates, followed by foodstuffs with 37, agriculture with 27, land management with 24, and forest management with 21 graduates. In order to enhance the collaboration between the Ministry of Agriculture and the Ministry of Education and Research in the field of vocational education in agriculture, the two ministers signed the "Co-operation Protocol between the Ministry of Education and Research and the Ministry of Agriculture for 2004-2008" on 26 August 2004. The ministries deem it necessary to continue the mutual co-operation to come up with the best solutions for ensuring high quality level of agricultural education and agricultural research. The Ministry of Agriculture organised the conference "The Development of Vocational Education in Agriculture", aiming at specifying the perspectives and suggestions of the interest groups in the field of vocational education and determining future actions. In 2004, the Ministry continued its co-operation with the Rural Development Foundation and the Estonian Chamber of Agriculture and Commerce to award scholarships for students of agricultural specialities

The amount of the scholarship depends on the student's academic performance and specialities, up to 1,000 *kroons* (64 €) per month. Vocational competitions were held between the students of agricultural specialities in vocational schools and young farmers.

1.1.2. Agricultural and rural advisory/consultancy services

The goal of the advisory service is to develop agricultural producers by competent advice, to disseminate the information necessary for rural entrepreneurs, and to introduce the topics relating to accession to the EU.

Special attention was paid also to disseminate the information and advice farmers on national agro-environment support in 56 municipalities. In 2003, 28 seminars were organised where the principles and the requirements of the support were introduced. During the 33-group advice days for environment-friendly management plans were prepared in farmer-adviser co-operation. There was also requirement for 6-hours compulsory training under the environment-friendly management scheme in the 2 special pilot areas. In addition to the aforementioned activities, the special supplementary measures training, field days and common seminars of farmers, advisors, representatives of Ministry and inspectors were held. National implementation of the agro-environment support has shown very clearly the need good advisory and training service on the successful implementation of the support.

After EU accession (2007-2013), Estonia will launch a measure to support farm advisory and extension services under the RDS. This will provide new opportunities for farmers and new challenges for advisors. The measure promotes an enhancement in the knowledge and skills of farmers via advisory, information, and support services.

1.1.3 Role of farmers' groups, including national or regional farmers' organisations

Since the end of the 1980s, the third sector developed rapidly everywhere in Estonia, including rural areas. Owing to non-governmental organisations (NGOs), rural inhabitants now have new opportunities to develop and state their positions, find jobs, and spend leisure time. The activities of NGOs in rural areas give rural population a chance to take active part in local development.

In Estonia, the third sector has been supported by the EU (PHARE projects), the UN Development Programme, and USA via its embassy, Scandinavian organisations, the Open Estonia Foundation, and many others. Foreign partners have brought know-how and resources to Estonia.

Agricultural producers are united by the Estonian Chamber of Agriculture and Commerce - ECAC (<http://www.epkk.ee/>), to which the Estonian Federation of Agricultural Producers and the Estonian Farmers' Federation (<http://etkl.antnet.ee/etkl/>) belong as the largest members.

The aim of the ECAC is to promote cooperation between the Estonian farmers and producers of agricultural products, to develop trade in agricultural products and foodstuffs on the domestic and foreign markets, to organise communication with the EU farmers' associations and defend the positions of its members. The ECAC offers to find business partners, processes and intermediates market and price information, holds fora and information days, and organises participation in foreign fairs. The ECAC conducts assessments of the quality of foodstuffs and issues the label 'Approved Estonian Taste'. The ECAC also organises the work of the information dissemination system for rural inhabitants, which consists of county information centres and an Internet portal.

The Estonian Dairy Association is a voluntary association of companies and individuals engaged in dairy business. Its aims are to develop and coordinate dairy activities and cooperate with international dairy organisations such as the International Dairy Federation (IDF) and others.

The Estonian Meat Association is a non-profit association of legal and natural persons engaged in the processing of meat and poultry and production of meat products, as well as those contributing to these activities. The Estonian Meat Association unites 19 meat industries (owning three animal and poultry farms), three companies contributing to meat industry, three educational and research institutions, and nine individual members. The Estonian Meat Association protect its members' positions to state authorities, holds information and contact days, offers complementary training, participation in domestic and foreign fairs and exhibitions, and supplies member companies and also non-members, for a charge, with the product standards of the Estonian Meat Association. The Estonian Meat Association belongs to the EU professional organisation for meat processing industry (CLITRAVI) and the European Livestock and Meat Trading Union (UECBV).

The Estonian Cooperative Association (<http://www.eca.ee>) unites both commercial and non-profit associations and its main aims are to propagate the principles of cooperative activities approved by the International Cooperative Association (ICA) and to protect the interests of the Estonian cooperative organisations.

The Estonian Horticultural Association is an organisation uniting over 90 farmers, traders, research institutions and schools engaged in horticulture. The Association holds training days to promote horticultural skills, protects the interests of its members, organises cooperation with domestic and foreign horticultural companies, drafts and supplements horticultural plant standards corresponding to the EU requirements, organises the approval of nurseries, and publishes special literature.

The Estonian Chamber of Environmental Associations (<http://www.rohelised.org>) unites environmental organisations of the third sector.⁺ The Chamber is not registered as a legal unit, but cooperates under the mutual agreement of environmental organisations and prepares and presents common positions.

Kodukant, the Movement of Estonian Villages and Small Towns (<http://www.kodukant.ee>), which has been registered as a non-profit association, is the most influential among the organisations to develop rural community activities. Via the country centres and member organisations of *Kodukant*, thousands of people all over Estonia participate in activities aimed at the development of local affairs. Besides supporting local initiative and creating cooperation networks, *Kodukant* is behind the nationwide Rural Parliament. In Estonia a wide-scale preparation of village development plans has started on the initiative of *Kodukant*.

1.2 Agricultural and rural skill levels

The level of education of labour has increased in the last five years. The share of labour having tertiary education (secondary education after general secondary education, higher education, Table 1.2 Level of education of labour, 2004 (%))

	The share of adults (25–64) having secondary and higher education, %
Estonia	88.9
Latvia	84.6
Lithuania	86.6
Finland	77.6
EU-25	69.8
EU-15	67.2

Source: Eurostat Labour Force Survey

In comparison with the indicators of EU-15, EU-25 and Finland, the level of education of Estonian labour is considerably higher and belongs to the same size group as the level of education in Latvia and Lithuania.

Master's level degree or Doctoral level degree) increased from 30% in 2000 to 32% in 2004. At the same time, the share of labour having upper secondary education (general secondary education, vocational education, vocational secondary education after basic education) decreased

¹ Estonian Youth Society for Nature Conservation, Estonian Ornithological Society, Estonian Green Movement, Sorex – Estonian Student Society for Environment Protection, Estonian Fund for Nature, Nõmme Road Society, Society for the Protection of Habitats Heritage, Estonian Institute for Sustainable Development, Tartu Students' Nature Protection Circle, Artificial Environment Institute.

from 57,8% to 56,9% at the same period of time. In 2004, total share of labour force having tertiary and upper secondary education was 88.9%.

2 Specific technology transfer issues

2.1. Training provision

2.1.1. Quality and suitability of provision

Agricultural training provided mainly by highly educated staff or lectures from universities and governmental organisations (Ministry of Agriculture, ARIB, Research institutes etc.).

2.1.2. Availability and spatial issues

All producer organisations have the rooms with training facilities in every county. Therefore they have opportunities to provide high quality short time training services.

2.1.3. Practical issues

The main popular issues are:

On the field of economics:

- New CAP and measures of Estonian Rural Development Plan in rural life and agriculture;
- Implementation of SAPS and SFP systems in agriculture;
- Complementary National Direct Payments (CNDP);

On the field of animal production

- Gross compliance issues;
- Animal health issues;
- Veterinary issues;
- Food control.

On the field of plant production

- Gross compliance issues;
- Environment and sustainable development;
- Conditions for ecological farms;
- Technological development.

2.1.4. Demand side issues

Taking into account diversification problems of small agricultural producers (inc. family farms) the problems are:

- Lack of technological knowledge's for specific plant cultivation (berries, energy crops, herbs etc);
- Starting new non agricultural businesses;
- Local services (multifunctional farm conception);
- New CAP opportunities for Small and Medium Size Enterprises (SME).

2.1.5. SWOT analysis

Training provision

Strengths	Weaknesses
Significant share of agricultural producers with higher professional education in rural areas; Basic general education is provided close to place of resident; Good training infrastructure on county level (rooms, equipment, internet etc)	Lack of funds to improve the general education programmes; Insufficient amount of vocational schools in rural areas; Insufficient number of local libraries with free access to Internet (parish level).
Opportunities	Threats
Establishment of new regional centres for training (by ERDP 2007-2013); Financing of training centres in rural areas are rising;	Unfavourable age structure of trainers; Outflow of young teachers;

2.2 Extension and advisory services

2.2.1. Public sector services

Advisory support granted as state aid means financial aid to an agricultural producer or fish farmer, covering the cost of the individual advice in full or in part.

2002–2500 producers on average use the individual agricultural advisory service every year. In June 2005, there were 113 attested advisors in Estonia, who can provide advice with support from the state. Information on attested advisors is available at the Ministry of Agriculture, the Agricultural Registers and Information Board (hereinafter ARIB), farm associations, the Estonian Advisors Association, county governments, and the ECAC Information Centre. A farmer has to pay a part of the price of advice — the farmer selects a suitable advisor and defines the details of the service needed. The farmer and advisor agree on the price according to the scope and quality of the service.

Individual advisory support has been administered by the ARIB since 2001. ARIB received 1641 applications for advisory support in 2005, of which 1510 were approved for payment. In 2006, ARIB received 1492 applications for advisory support, of which 1334 were approved for payment. In 2005, advisory support was paid to 861 farmers. Studies have shown that farmers appreciate the activities of advisors highly.

The state finances group advice and county advisory projects via county governments; county specialists decide on the need for projects. Group advice is mainly carried out as one-day training courses. County projects also include several days' training sessions, information publications, and other activities. 147 group advice contracts were made and 3368 people participated in the events in 2004. The average length of an event was six hours; the average number of participants was 24. In 2004, a total of 156 group advice contracts were concluded and 3608 people participated in the events. An average event lasted 6 hours and had 23 participants.

2.2.2. Private sector services

No private companies on the field of extension services in Estonian agriculture. The number of private advisors operating as legal persons is rather small.

2.2.3. Demand side issues

Main demand issues on the field of agricultural advice are:

On the field of economy:

- Financing and book-keeping;
- Completion of business plans;
- Completions of subsidies applications.

Animal sector:

- Animal breeding problems;
- Feeding and feedstuffs;
- Technological advise.

Plant growing:

- Fertilising problems;
- Plant protection problems;
- Environment and ecological production;
- Best Available Techniques (BAT) advice.

2.2.4. SWOT analysis

Extension and advisory services

Strengths	Weaknesses
Strong network of agricultural advisory centres; Sufficient quality of advisors; Relatively short distance of advisory services in county level;	Insufficient number of advisors on the field of alternative production branches; Unfavourable age structure of advisors; Complicated compensation system;
Opportunities	Threats
According to new Rural Development Plan (2007-2013) financing of advisory activities is significantly rising; Technological progress on the field of communication in rural areas (Internet); Opportunities to improve the advisors' qualifications;	Outflow of advisors to better compensated work; Different advise demand between the family farms and large agricultural companies; Rising bureaucracy;

2.3 Other important issues

Regardless of the fact that the Ministry of Agriculture published the relevant information on the EU political measures regarding agriculture and rural life as well as the new opportunities thereof in various information channels on a regular basis, the survey on the need for information revealed that agricultural producers had received conflicting information. Objective information exchange was hindered by negative predispositions prevailing among agricultural producers (mainly small farmers), which, in turn, were enhanced by eurosceptics, who communicated misleading information concerning the opportunities and requirements related to the EU agricultural policy. The Ministry of Agriculture faced the task of awaking small and medium-sized farmers' interest in communicating with government institutions, as well as winning the farmers' trust in official information communicated on the EU agricultural policy. To get an overview of the situation, the Ministry of Agriculture ordered two surveys from the research company Saar Poll in 2002, and one survey on the need of information from the advisory centre in 2003. The surveys aimed at ascertaining the main obstacles that hinder efficient operations and data availability, discerning the harmful or positive effect of accession to the EU and determining the causes behind the problems occurring upon the forwarding and reception of information, as well as developing efficient methods thereof. Several questions needed to be answered in order to determine the causes behind problems related to the forwarding of information. Has the information been made available? What are the preferred channels (printed press, TV, publications, seminars, consulting, etc.) for receiving information? Is the information explicable and reliable? What is the main cause for dissatisfaction? Has the dissatisfaction been caused by the overload of information, failure to separate the wheat from the chaff, the scattering of information, etc.? How to increase satisfaction and how to decrease dissatisfaction? We were also interested in how active/passive people themselves are upon collecting information. Must everything be delivered on a silver plate, or do people actively pursue information themselves? If so, what kind of information? Which channels do they use? How? If the interest is passive, what kind of a "plate" should be used for the delivery of information? The results of the survey revealed that the positive information possessed by farmers is rather of general nature (e.g. we are told that life will get better and we will start receiving the supports), whereas negative information is often specific (e.g. a Finnish farmer told us at a presentation that the price of fuel went up while the price of crop went down in Finland after accession to the EU). Agricultural producers were also confused by misleading information published by eurosceptics on the rise in fuel excise duty as well as extensive costs and unaffordable requirements related to the accession. It turned out that a majority of those polled (mainly medium-sized and small farmers) have failed to receive any information published on the EU requirements and opportunities. This has been caused by the failure to independently collect and process information, as well as little confidence in public information services, poor solvency and inability to use advisory services and partake in training days. Many agricultural producers were embittered and "became passive and frightened bystanders in the accession process" (Saar Poll, report, December 2002). Although farmers do not consider lack of information to be their main problem, it is the lack of information which is often the biggest hindrance for development. On the other hand, heads of large and successful agricultural companies, who have access to the Internet, use advisory services and regularly visit seminars and partake in training days, were well-informed of EU requirements and the related opportunities. Upon planning the publication of information, the Ministry of Agriculture considered the research company's recommendations as regards the choice of information channels, the presentation methods and the most desired topics. In 2003 and 2004, "*Euronõu*" ("Euro-advice") was periodically published as an extra to *Maaleht*. In addition, poorly informed small farmers were sent a free-of-charge brochure by post. The survey conducted by advisors in 2003 revealed that the advisory service recommended by the research

company turned out to be most efficient. In the aftermath of the World Bank project, the Ministry concluded, in 2002, an agreement with the Estonian Chamber of Agriculture and Commerce (ECAC) on the organisation of the publication of information so as to maximise access to the target groups. Established in the same year, the Information Centre of ECAC, which first lay within the jurisdiction of the Rural Development Foundation, was incorporated under the ECAC in January 2003. The Information Centre of ECAC started providing free-of-charge information to agricultural producers with poor solvency, as well as rendering simpler but urgent information services. In addition to publishing official information (laws, regulations, guidelines), the Information Centre of ECAC was also assigned with the task of systematising data, providing clarifications, commenting on legal acts and collecting from agricultural producers feedback on the need for information. The ECAC information centre established relations with the regional information and advisory centres of professional associations of agricultural producers that had so far lacked efficiency and systematisation, and concluded information forwarding agreements with agricultural producers. Under the supervision of the ECAC, the regional information centres implemented their own development plans and analysed the hitherto activities in 2003. By now, the centres have adopted a smooth work rhythm and have no need for constant handling of administrative issues. The Information Centre of ECAC has also opened an Internet portal to make information available to agricultural producers and regional information centres, and organises training and information days. The Centre serves as a mediator between agricultural producers and the holders of the information - public institutions, scientific research establishments and business enterprises. Fuelled by mutual interest, the information centres and advisory centres established a close partnership, enabling to enhance the quality of information and maximise rational use of resources. The partnership has yielded excellent results. Implemented in 2005, Measure 3.8 of the National Development Plan enables regional information centres to apply for the status of information and advisory centres, further enhancing the availability of information and advice in the different counties.

Internet structure

In Estonia, 30% of households had a computer, 22% of households had a computer with Internet access and computer users made up 54% and Internet users 49% of adult population. In 2004, 7% of the telephone main lines used ADSL in Estonia, 27% of households' Internet access was realised on ADSL lines, 19% got Internet access through cable-TV cable-modem, 4% used other types of connections, 63,4% of enterprises used connection for Internet access.

Table Internet infrastructure – the area covered by DSL, 2004 (%)

	Rural area	Suburban areas	Urban area	Average
Estonia	70*	92*	96*	90
Germany	55	97	99	91
Italy	40	84	98	85
Finland	80	98	99	92
Sweden	87	97	98	96
EU-15	62	93	95	88

Source: DG-INFSO * estimate

According to the data of “Estonian broadband strategy for 2005–2007”, at the beginning of 2005 ca 90% of Estonian families lived in places where it was possible to get connection. The situation varies by counties as in some counties the availability of connection is considerably worse. According to calculations, connection was not available for 30% rural inhabitants.

3 Overview and prospects

3.1 Training

According to Articles 66 and 68 of Council Regulation (EC) No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), Estonia will establish its National Rural Network which will include the associations and organisations representing programme beneficiaries, and the organisations and authorities involved in rural development or in the implementation of rural development plan on regional or national level and related to the objectives of the programme: Estonian Chamber of Agriculture and Commerce; associations of agricultural producers and farmers, incl. Estonian Young Farmers Organisation; associations of food quality network (e.g. Union of Organic Producers); associations of forest owners; associations of agricultural produce processing industries and forestry associations; associations of agricultural and forest management advisers; unions of land improvement associations; agricultural and forestry educational and training institutions; agricultural and forestry educational and research institutions; environmental protection organisations; Natura 2000 network agency etc.; rural small enterprise development associations; associations of rural tourism undertakings; cultural heritage protection associations; rural associations of village movement, young people and women and associations engaged in social inclusion; rural enterprise and development advisory, training, educational and research institutions etc.; local action groups and their voluntary networks.

Rural network management and administration implemented by the state authorities within the area of government of the Ministry of Agriculture. Rural network operates in the form of interactive web environment and as meetings, seminars and workshops regularly organised for the participants in rural network.

At the Estonian level, the duties of rural network include the following: exchange of the relevant expertise, support for the implementation, monitoring and evaluation of rural development policy, co-ordination of information flow between the local, national and European level:

- identification and analysis of positive experience gained and innovative approaches applied in the implementation of RDS and RDP, exchange of information;
- organisation of rural network activity and of the exchange of experience and know-how;
- establishment of a training programme for local action groups;
- support for internal and trans-national co-operation (incl. the establishment and administration of a relevant website, organisation of seminars and other events, finding co-operation partners, the establishment of database of experts, advice to local action groups, etc.).

In the performance of rural network tasks, the action plan mentioned in Article 68 (2b) of Council Regulation (EC) No 1698/2005 is considered. Rural network will be financed from the funds of RDP technical assistance. For the establishment of the network, 1 000 000 kroons (63912 €) and for the first year of activity 2 000 000 (127 823 €) kroons have been provided. In the course of the establishment of the network, the above mentioned sums may be reviewed. In any case, the budget will not exceed 5 000 000 (319558 €) kroons per year. It is planned to use 25% of the network budget for the administration of the network.

3.2. Extension

The general goal of the ERDP — support for the regionally balanced functioning of rural areas – is contributed by the SPD agricultural measures under 3. Priority of the SPD “Agriculture, Fisheries and Rural Development” measures:

Measure 3.1: Investment into Agricultural Holdings (EAGGF)

Measure 3.2: Investment Support for Improving Processing and Marketing of Agricultural Products (EAGGF)

Measure 3.3: Diversification of Economic Activities in Rural Areas (EAGGF)

Measure 3.4: Integrated Land Improvement (EAGGF)

Measure 3.5: Renovation and Development of Villages (EAGGF)

Measure 3.6: Local Initiative based Development Projects – LEADER (EAGGF)

Measure 3.7: Forestry (EAGGF)

Measure 3.8: Support for Setting-up and Provision of Farm Advisory and Extension Services (EAGGF)

The overall aim of the measure is the provision of farm advisory and extension services. Support is granted for the provision of individual farm advisory services (which is divided into:

Professional advisory services;

Advisory services related to the compliance with statutory management requirements and good agricultural and environmental condition arising from the CAP-reform), national and local extension services and for the creation of agricultural advisory centres.

The beneficiaries are farmers. The applicants are approved farm advisory centres (individual advisory services and setting-up aid for advisory centres), legal persons and sole proprietors in the field of agricultural advisory, extension and training services (extension events).

The measure contributes to the knowledge and skills of all applicants for the SPD and ERDP measures and thus facilitates a better use of the support funds and achievement of the aims of the measures.

3.3 Linkages between technology transfer agencies

On 21 December 2004, the government approved the national programme “**Applied research and development in the field of agriculture 2004- 2008**”. The Ministry of Agriculture is the first ministry to succeed in devising a state programme as required by the Organisation of Research and Development Act for the funding of applied research. The overall programme budget for 2004 was 20.5 million kroons. Pursuant to the coalition agreement, this figure will reach an annual 44 million kroons in 2005-2008. A total, 18 applied research projects were funded in 2004. **Division of budgetary expenditure in 2004 (in millions of kroons)**

Division of budgetary expenditure in 2004 (in million kroons)

Institutes within the jurisdiction of the Ministry of Agriculture	13,2
Universities: institutes and enterprises outside the jurisdiction of Ministry of Agriculture	7,3

The submitted applications were meticulously analysed by expert committees and the council for agricultural sciences. The applied research projects were primarily carried out by the EAU researchers in the fields of horticulture, plant biotechnology, plant protection, food safety, animal husbandry (incl. infectious and internal diseases, reproduction biology and feeding), as well as ecophysiology. With 8.62 million kroons, the work commissioned by the Ministry of Agriculture (incl. applied research, preparation of manuals, training, specific contracts, etc.) gave nearly one-eighths of the total volume of research and development activities conducted at EAU in 2004. The overview of the applied research and development projects funded by the Ministry of Agriculture is available in the Research and Development in Estonia data system at <http://www.eris.ee/>.

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Agriculture and development of rural life-Overview 2004/2005

National Development Plan-Single Programming Document 2003-2006

Annex

Training provision and use by the rural population

Approx. % of population that is rural by:	
(a) place of residence	32%
(b) place of work	12%
Approx. % of all workers in rural areas in:	
(a) agricultural employment	18%
(b) non-agricultural employment	82%
Number of universities and similar institutions with agricultural courses	3
Number of colleges and similar institutions providing agricultural training	11
Number of other training providers:	
(a) publicly funded	97%
(b) privately funded	3%
Approx. % of agricultural personnel with:	
(a) degree or equivalent	0,02
(b) diploma or equivalent	4
(c) certificate or equivalent	38
(d) full secondary education	21
(e) less than full secondary education	29
(f) little or no formal education	8
Estimated level of demand for further training: (use A=high, B=moderate, C=low)	
Agriculture – arable/cropping production	B
Agriculture – livestock production	B
Business management	A
Other [please specify; add rows as necessary]	B
Economics	A

Advisory and extension services available to agricultural and rural businesses

Public sector organisations by name	Approximate number of advisors or consultants
Physical persons (FIE)	83
Estonian Farmers Union	15
Estonian Producers Union	15
Total	113
Private sector organisations by name	Approximate number of advisors or consultants
[add rows as necessary]	
Physical persons (FIE)	7
Estimated % of farmers actually using advisory services of some sort	57%
Estimated % of NAE rural businesses actually using advisory services of some sort	19%
Estimated demand for new advisory services - % of all farms and other rural businesses	11%